

In the Abstract

Please replace the entire Abstract with the following:

A sensor arrangement is provided for use in the seismic investigation of geological formations below the seabed. A plurality of sensor nodes (20) are provided and are positioned for deployment on the seabed to collect pressure waves and shear waves from the geological formations and to transfer seismic data to a surface receiver. Each sensor node (20) may include a cylindrical structure (22), which is intended to penetrate downwardly into the seabed. At least one, preferably three, geophones (30-32) are positioned in connection with this structure (22). An advantageous method for operating a seismic mapping system with sensor arrangements orderly deployed on the seabed records data concerning system behavior and seismic data. This data may be further processed separately.